

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/012540 A1

(51) International Patent Classification⁷: C12P 19/04,
C08B 11/20

TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(21) International Application Number:
PCT/EP2004/051491

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: 14 July 2004 (14.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
VA2003A000025 17 July 2003 (17.07.2003) IT

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,
SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG)

(71) Applicant (for all designated States except US): LAM-
BERTI SPA [IT/IT]; Via Piave 18, I-21041 Albizzate (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MOLTENI,
Giuseppe [IT/IT]; Via Osoppo, 1, I-21100 Varese (IT).
FORMANTICI, Cristina [IT/IT]; Viale Reina, 10,
I-21040 Ierago con Orago (IT). DEMARCHI, Cristina
[IT/IT]; Via Castelnovate 19b, I-28047 Oleggio (IT).
MARZETTA, Roberto [IT/IT]; Via Confalonieri, 15,
I-21040 Castronno (IT). GALANTE, Yves [IT/IT]; Piazza
dello Sport, 1/4, I-20020 Arese (IT). LI BASSI, Giuseppe
[IT/IT]; Via Stretti, 4, I-21026 Gavirate (IT).

Published:

— with international search report
— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: ENZYMATIC DEPOLYMERISATION OF CARBOXYMETHYLCELLULOSE IN HYDROALCOHOLIC
SOLUTIONS

(57) Abstract: The present invention refers to the procedure for the preparation of aqueous concentrated solutions of low viscos-
ity carboxymethylcellulose by enzymatic depolymerisation of medium viscosity carboxymethylcellulose in the form of dispersed
powder in a hydro-alcoholic heterogeneous medium, and to such aqueous concentrated solutions which have Brookfield viscosity,
at 20 °C and 20 rpm, comprised between 2000 and 5000 mPa*s. Preferred alcohol-water biphasic systems have from 40% to 50%
of alcohol (e.g., ethanol or isopropanol). The aqueous solutions of carboxymethylcellulose produced are stable over time, and their
viscosity varies no more than 10% in 3 months.



WO 2005/012540 A1